SUB-8100 Active Bass Subwoofer

The information enclosed in this installation guide is to be used as merely an outline to assist you during the process of installation. This guide does not cover every installation possibility, vehicle, or every aspect of the installation process.

Retro Manufacturing, LLC, Retrosound, or its subsidiaries, assume no responsibility for a proper or improper installation. Every attempt has been made to make this installation guide as informative as possible, and therefore it may be updated from time to time. Please check our website for the latest update. (www.retrosoundusa.com).

NOTES:

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Welcome!

Thank you for your purchase of our Retrosound SUB-8100! We hope it will provide you with years of enjoyment. Below are some features of this unit:

- Aluminum Enclosure for Optimum Heat Dissipation
- Compact Footprint (9"W x 2.75"H x 13.74"L)
- 100 Watt Max Power Output
- High/Low Level Inputs
- Fully Adjustable Crossover Network (50-100Hz)
- Adjustable 0-180 Degree Phase Control
- Frequency Response Range (35-100Hz)

What's in the Box

The accessory items and hardware shown below are packaged with your SUB-8100 subwoofer.

Mounting Brackets (x4)

Wire Harness (x1)

Washers (x4)

Spring Washers (x4)

Mounting Bracket Bolts (x4)

Sheet Metal Screws (x4)

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Warnings and Precautions

This equipment has been tested and found to comply with the limits for a Class B device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and, if not installed and used in accordance with instructions, may cause harmful interference with radio communications. However, there is no guarantee that radio interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to consult the dealer or an experienced radio/TV technician for help. You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Observe these warnings and precautions when using this unit:

- Carefully read this manual before using the unit. If you encounter any problems that are not covered in this manual, please consult the dealer where you purchased the unit or the dealer nearest you. You may also email us at: support@retrosoundusa.com.
- Do not turn the unit on if the temperature inside the car is very high. Always allow the unit to cool down before usage.
- Do not operate the system while driving. Operating the system will distract the driver from safe driving and can cause accidents. Always stop the vehicle in a safe location and engage the parking brake before operating the system.
- This product is designed for operation with a negative grounded 12 V DC battery system. Never operate this product with other battery systems, especially a 24 V DC battery system.
- Do not disassemble, modify the unit or attempt to repair the product yourself. If the product needs to be repaired, consult your dealer or Retro Manufacturing directly.
- Do not use the unit when it is out of order. If the unit is out of order (no power, no sound) or in an abnormal state (is exposed to water, is smoking, or emits an odor), turn it off immediately and consult your dealer.
- Refer fuse replacement to qualified service personnel. When the fuse blows out, eliminate the cause and have it replaced with the fuse prescribed for this unit by a qualified service technician. Incorrect replacement of the fuse may lead to smoke, fire, and damage to the product.

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- If the unit does not turn on, check the connections first. Then, check whether the fuse in your vehicle's fuse box is blown and check the fuse at the unit's wiring harness.
- Keep the sound volume at an appropriate level. Active subwoofers may produce sound pressure levels that exceed the threshold at which hearing loss may result. Practice safe listending and keep the volume level low enough to be aware of road and traffic conditions while driving.

Observe these warnings and precautions during installation:

- Avoid installing this unit where it will be exposed to direct sunlight or excessive heat, as smoke, fire, or other damage to the unit may occur.
- Avoid installing this unit where it will be exposed to water, moisture, dust, or excessive vibration. Exposure of the unit to water, moisture, or dust may lead to smoke, fire, or other damage to the unit.
- Refer wiring and installation to qualified service personnel. Installation of this unit requires special skills and experience. For maximum safety, have it installed by your dealer. Retro Manufacturing is not liable for any problems resulting from your own installation of the unit. Please be sure to follow our instructions carefully before attempting installation. Not following the instructions to properly install and wire the product could cause an accident or fire.
- **Disconnect the lead from the negative (–) battery terminal before installation.** Wiring and installation with the negative (–) battery terminal connected may cause electrical shock and injury due to a short circuit. Some cars equipped with the electrical safety system have specific procedures for battery terminal disconnection. FAILURE TO FOLLOW THIS PROCEDURE MAY LEAD TO THE UNINTENDED ACTIVATION OF THE ELECTRICAL SAFETY SYSTEM RESULTING IN DAMAGE TO THE VEHICLE AND PERSONAL INJURY OR DEATH.
- Take care not to damage the leads. When wiring, take care not to damage the leads. Prevent them from getting caught in the vehicle chassis, screws, and moving parts such as seat rails. Do not scratch, pull, bend or twist the leads. Do not run them near heat sources or place heavy objects on them. If leads must be routed around sharp metal edges, protect the leads by winding them with vinyl tape or similar protection.
- Use the supplied or designated parts and appropriate tools to install the product. The use of parts other than those supplied or designated may result in internal damage to the unit. Faulty installation may lead to an accident, a malfunction or fire.

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- Never use safety-related components for installation, grounding, and other such functions. Do not use safety-related vehicle components (fuel tank, brake, suspension, steering wheel, pedals, airbag, etc.) for wiring or fixing the product or its accessories.
- Installing the product on the air bag cover or in a location where it interferes with airbag operation is prohibited.
- In the case of installation to an airbag-equipped car, confirm warnings and cautions of the vehicle manufacturer before installation.
- Check for piping, gasoline tank, electric wiring, and other items before installing the product. If you need to open a hole in the vehicle chassis to attach or wire the product, first check where the wire harness, gasoline tank, and electric wiring are located. Then open the hole from outside if possible.
- Never install the product in a location where it interferes with your field of vision.
- Never have the power cord branched to supply other equipment with power.
- After installation and wiring, you should check the normal operation of other electrical equipment. The continuation of their use in abnormal conditions may cause fire, electrical shock or a traffic accident.
- Make sure the leads do not interfere with driving or getting in and out of the vehicle.
- Insulate all exposed wires to prevent short circuiting.
- This unit is designed for use exclusively in automobiles.
- Do not operate the unit for a prolonged period with the engine turned off. Operating the audio system for a long period of time with the engine turned off will drain the battery.

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Installation

To ensure proper operation of this Retrosound product, please read these instructions carefully before using and installing this powered subwoofer.

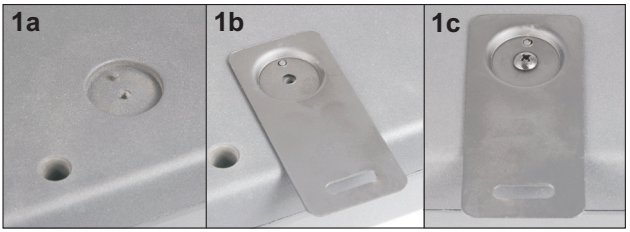
This Owner's manual does not cover all possible installation scenarios. If you feel you can't install this product yourself, please take it to a local car audio professional, or contact us via at support@retrosoundusa.com or call 909-364-1372 | 888-325-1555.

IMPORTANT! This device is a high-power audio amplifier intended for installation in vehicles with a 12-Volt negative ground electrical system. Connecting or operating the amplifier with another type of electrical system may cause damage to the amplifier or electrical system.

IMPORTANT! Disconnect the negative (-) battery cable before beginning installation. Verify the battery ground by checking that one wire is connected to the starter mounting bolt or engine block and another to the vehicle chassis using at least a #8 gauge wire. Also make sure the alternator connections are secure and free from corrosion, rust or dirt.

WARNING! The amplifier must not be enclosed or covered, as it may overheat. Do not cover with carpets or enclose it behind trim panels. Do not mount the amplifier in an inverted or upside down position. Select a mounting location where drilling of pilot holes will not damage any wires, control cables, fuel lines, fuel tanks, hydraulic lines or other vehicle systems or components.

1. Affix the Mounting Brackets to the bottom of the amp using the enclosed Mounting Bracket Bolts.



2. Use the enclosed Sheet Metal Screws to mount the powered sub to the desired location.
3. Refer to "End Panel Controls/Connections" for connection instructions.

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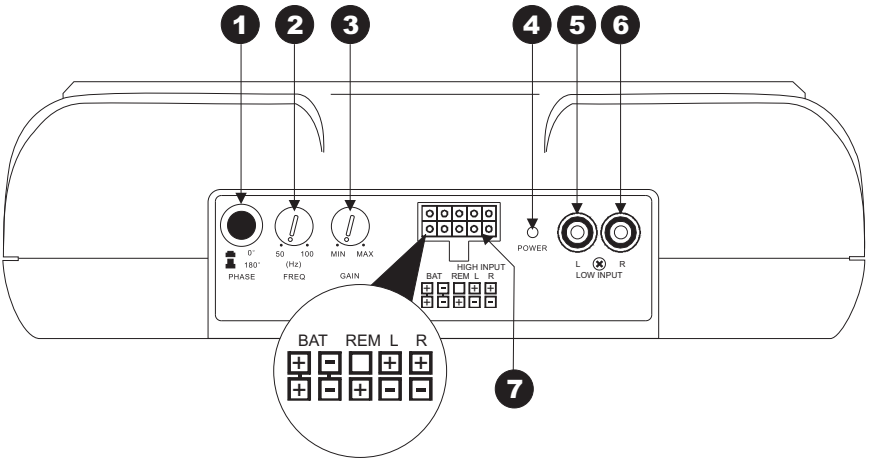
End Panel Controls/Connections



1. PHASE: Adjust subwoofer polarity between 0 (normal) and 180 degrees (reverse). At 0, the subwoofer is "in-phase" with the other speakers, meaning the subwoofer moves in/out along with the speakers. When reversed, the subwoofer moves in when the speakers move out. Reversing polarity may be useful depending on subwoofer placement and acoustics.
2. FREQ: The Low Pass Filter controls adjust the crossover point. The typical crossover setting is between 60Hz and 80Hz. Since musical tastes vary, you should play music that you would normally listen to in your vehicle, using the above settings as a starting point. If necessary, we suggest setting the crossover point by ear.
3. GAIN: The input level control (GAIN) matches the output of your radio to the input of the amplifier. To adjust the input gain after install, begin by turning the control all the way to the left. Play your input source (CD player, etc.), with the bass and treble settings flat, then slowly increase the volume until you begin to hear distortion. Adjust the volume back down until the distortion is no longer heard. Next, increase the amplifier GAIN slowly until you begin to hear distortion. Adjust the GAIN back down until the distortion is no longer heard. Your radio and amplifier levels are now matched.
4. POWER: The power LED provides a blue indication that the amplifier is turned on.
5. LOW INPUT L: White RCA connector for left low level input.

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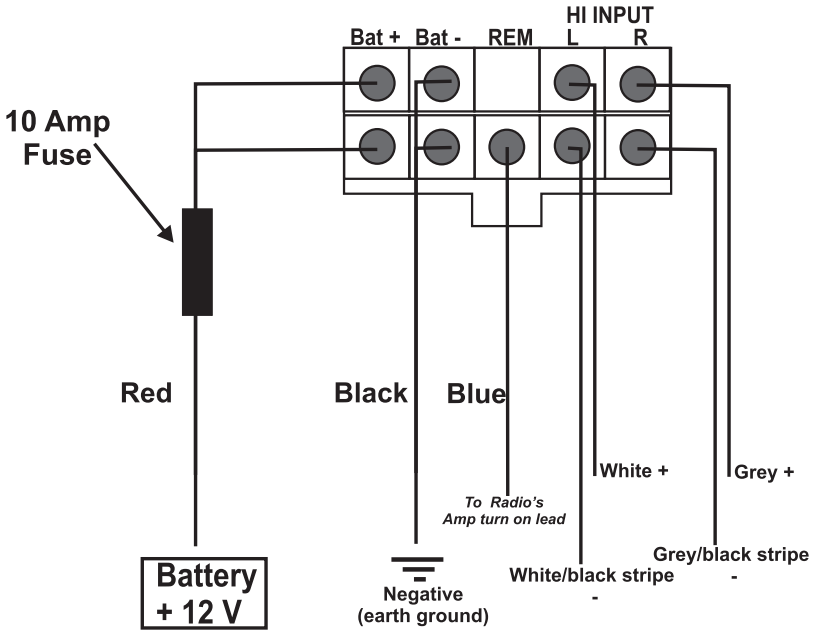
6. LOW INPUT R: Red RCA connector for right low level input.
   NOTE: Gold plated RCA connectors are recommended.
7. HI INPUT:
   - BAT: Connect directly to the vehicle battery positive (+) terminal with a 10-14 gauge wire.
   - REM: Connect the power antenna or amplifier turn-on lead from the receiver to the amplifier remote (REM) terminal.
   - L/R: High level input should be used when an RCA output is not available from the receiver. Connect the speaker outputs from the receiver to the high level input connector, observing proper polarity.

NOTE: Connect only the low level (RCA) or high level input. Do not connect both at the same time.



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Troubleshooting

Problem	Possible Cause	Action to Solve Problem
Powered subwoofer will not turn on (no Power on LED indicator)	12 Volt Batt+ wire not connected or incorrect voltage / remote wire not connected or incorrect voltage	Check all connections for proper voltage with a volt meter. Voltage range: 11-16 volts.
	Ground wire not connected	Check ground connection.
	Fuse on Batt+ is blown	Replace blown fuse.
No sound heard from unit but LED power indicator is on	Volume turned all the way down	Increase head unit volume / check volume level on head unit.
	Gain control on sub amp is turned down	Increase gain control on end panel of sub amp.
	Input signal not connected	Check low level inputs for proper connection.
Unit blows fuses	Incorrect fuse rating	Use fuses with correct 10 amp rating.
	Batt+ wire is touching chassis ground	Check for pinched or shorted wire.
	On-board subwoofer defective	Check/replace subwoofer.
	Not +12 Volts / car battery not connected	Make sure the vehicle is + 12 volts and that the car battery is correctly connected to the vehicle.
	Remote lead shorting	Check the Remote lead to make sure it is not shorting out the amp.
Engine noise	Bad ground connection	Make sure the Sub-8100 unit is grounded to clean bare metal of the vehicle.
	Signal ground loop or RFI interference	Re-route RCA cables from existing high current wiring .

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Problem	Possible Cause	Action to Solve Problem
Distorted audio output	Incorrect input signal type or input level is too high	Check connections and reduce/adjust input level.
	Poor bass response	Adjust phase control.
		Check polarity of speaker wires if using high level input.
Low audio Output	Incorrect input signal type or input level too low	Check connections and increase/adjust input level.
Weak bass response	Low frequency output is out of phase	Adjust phase control.
		Check crossover adjustment.

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Specifications

Power Supply
Voltage: 10.5 - 16.0 VDC
Idling Current (On): 0.4 A
Idling Current (Off): <0.002 mA

Amplifier Stage
Output Power @14.4 V: 100 Watts RMS / 200 Watt Max
S/N Ratio: > 100 dB
Input Sensitivity: 100 mV - 6.0 V
Frequency Response: 35 Hz - 100 Hz
Total Harmonic Distortion: 0.08%

Filters
Low Pass Filter/Slope: 50 Hz - 100 Hz / 12dB
Phase Control (variable): 0-180

Other Specifications
Fuse: 10A x 1
Size (W x H x L): 9 x 2.75 x 13.74 inches / 349 x 70 x 235 mm
Weight: 9 lbs / 4.08 Kg

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Limited Warranty

If your product does not work properly because of defects in materials and workmanship RetroSound a division of Retro Manufacturing, LLC (collectively referred to as "the warrantor") will, for the length of the period indicated in the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or refurbished product. The decision to repair or replace will be made by the warrantor.

CATEGORIES	PARTS	LABOR
Radios	Two (2) Years	Two (2) Years
Speakers/Amplifiers	One (1) Year	One (1) Year
Accessories	90 Days	90 Days

During the "Labor" warranty period, there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must carry in or mail in your product prepaid during the warranty period. If batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States, Alaska, Hawaii or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is". A purchase receipt or other proof of the original purchase date is required for warranty service.

To handle a warranty issue, contact us at 909-364-1372 or email us at support@retrosoundusa.com and get a Return Authorization number. All returns and warranty issues must receive a Return Authorization (RA) number. Any product received without a RA number will be refused. Once a number is issued, send the product to this address:

Retro Manufacturing, LLC
5785 Waco Street
Chino, California 91710
Phone: 909-364-1372
Fax: 909-364-8670

LIMITED WARRANTY-LIMITS AND EXCLUSIONS

This warranty ONLY COVERS failures due to defects in materials and workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred during shipment, failures which are caused by products not supplied by the warrantor, failures which result from accident, misuse, abuse, neglect, bug infestation, mishandling, misapplication, alteration, faulty installation, set-up adjustment, maladjustment of consumer control, improper maintenance, improper antenna, inadequate signal reception or pickup, power line surge, improper voltage supply, lightning, modification, commercial use (such as use in hotels, offices, restaurants, or other business uses) or rental use of the product, or service by anyone other than the technician from Factory Service center or other authorized service centers, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the sevicer, and loss of media, data or other memory contents. The items listed are not exclusive, but are for illustration only.) ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or service center.

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Modern Sound for your Classic

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